



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/760,180 | 01/12/2001 | Paramvir Bahl | MSI-566US | 2778 |

22801 7590 05/20/2004

LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER

BATES, KEVIN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2155

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 09/760,180 | Applicant(s) BAHL, PARAMVIR | |
| | Examiner Kevin Bates | Art Unit 2155 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to a communication made on January 12, 2001.

The Change of Address was received on August 29, 2001.

Claims 1-58 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 3, 7, 11-17, 19, 22, 24-30, 32, 34, 36-38, 40, 42-47, 49-50, 52-54, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Theimer (5493692).

Regarding claim 1, Theimer discloses a method, comprising: periodically identifying a location of a first computer that is used by a first computer user (Column 4, lines 30 – 33; Column 8, lines 45 – 58; Column 9, lines 35 – 37); receiving a request from a computing unit for the location of the first computer user (Column 9, lines 7 – 20); determining the last known location of the first computer (Column 9, lines 31 – 33); transmitting the location of the first computer to the computing unit (Column 9, lines 15 – 20); and recognizing the location of the first computer as the location of the first to computer user (Column 9, lines 31 – 33).

Regarding claim 2, Theimer discloses that the first computer is a mobile computer operating within a wireless network (Column 5, lines 48 – 51).

Regarding claim 3, Theimer discloses that periodically identifying a location of the first computer comprises: associating the first computer user with the location of the first computer; is transmitting the location of the first computer and the associated first computer user to a network server during each of several recurring time periods; and storing the transmitted information on the network server (Column 8, line 59 – Column 9, line 1).

Regarding claim 7, Theimer discloses that periodically identifying a location of the first computer further comprises: associating the first computer user name with the location of the first computer; transmitting the location of a network node to which the first computer is connected, the transmitting occurring once during each of several recurring time periods; and storing the location of the network node on a network server together with the first computer user name (Column 8, line 59 – Column 9, line 1; Column 8, lines 5 – 11).

Regarding claim 11, Theimer discloses periodically identifying a location of a first computer that is used by a first computer user further comprises periodically identifying a location of at least a second computer that is used by the first computer user and detecting an active signal from the computer that was most recently used by the first computer user; is and the determining the last known location of the first computer comprises determining the last known location of the computer indicating the active signal (Column 9, lines 26 – 37).

Regarding claim 12, Theimer discloses that determining the last known location of the first computing unit further comprises: searching a server database having a

plurality of computer users and a locations contained therein; and identifying a location associated with the first computer user (Column 9, lines 31 – 37).

Regarding claim 13, Theimer discloses that registering the first computer (Column 7, lines 35 – 60), and wherein the identifying a location of the first computer only occurs upon the receiving a request from the computing unit for the location of the to first computer (Column 8, lines 48 – 58 where the RPC is the request for the location information from the GPS).

Regarding claim 14, Theimer discloses that the last known location of the first computer is transmitted to the computing unit upon a request by the computing unit only if the computing unit is authorized to determine the location of the first computer (Column 11, lines 1 – 6).

Regarding claim 15, Theimer discloses encrypting the location of the first computer prior to transmitting the location of the first computer (Column 21, lines 13 – 20).

Regarding claim 16, Theimer discloses a method, comprising: determining a location of a computing unit (Column 4, lines 30 – 33); periodically transmitting, from the computing unit, the location of the computing unit to a network server together with a user name of a user using the computing unit (Column 8, line 64 – Column 9, line 1); and including an active signal with the periodically transmitted information when the user is actively using the computing unit (Column 9, lines 26 – 37).

Regarding claim 17, Theimer discloses that the computing unit is a mobile computing unit; and the network server is a wireless network server (Column 5, lines 48 – 51).

Regarding claim 19, Theimer discloses that the determining a location of a computing unit comprises receiving RF signals from a plurality of RF beacons having known locations and using environmental profiling to establish the location of the computing unit (Column 5, line 48 – Column 6, line 14).

Regarding claim 22, Theimer discloses that the location is rendered in coordinates relative to a known location (Column 8, lines 45 – 58; Column 9, lines 26 – 37).

Regarding claim 24, Theimer discloses that the location of the computing unit is the known location of a network node to which the computing unit is connected (Column 5, line 48 – Column 6, line 14).

Regarding claim 25, Theimer discloses that the user actively using the computing unit further comprises the user having used the computing unit to within a pre-defined time period (Column 27, lines 25 – 36).

Regarding claim 26, Theimer discloses that transmitting the location of the computer unit to a network server only occurs upon a request from the network server for the computer unit to update the is location of the computer unit (Column 8, lines 48 – 58 where the RPC is the request for the location information from the GPS).

Regarding claim 27, Theimer discloses encrypting is the location of the computing unit prior to transmitting the location of the computing unit to the network server (Column 21, lines 13 – 20).

Regarding claim 28, Theimer discloses a system, comprising: a server having memory; a user database stored in the memory of the server (Column 7, lines 29 – 60), the user database containing a user field for storing a user name of a mobile computer user, and a last known location field for storing a most recent location of a computer user identified in a corresponding user field (Column 7, line 61 – Column 8, line 11); a wireless access point configured to receive network transmissions from one or more mobile computers (Column 5, lines 27 – 32); a mobile computer having memory and a wireless network interface for communication with the wireless access point (Column 5, lines 48 – 55); a location tracking system in the mobile computer memory configured to determine a location of the mobile computer; a location manager in the mobile computer memory configured to periodically transmit the location of the mobile computer and the user name of a mobile computer user to the server via the wireless network interface (Column 8, lines 48 – 55; Column 6, lines 28 – 45); and a computing unit having a computing unit location manager configured to search the user database of the server to determine information regarding the location of a mobile user (Column 4, lines 30 – 34; Column 7, lines 29 – 60).

Regarding claim 29, Theimer discloses that the computing unit is a stationary computing unit (Column 5, lines 41 – 48).

Regarding claim 30, Theimer discloses that the computing unit is a mobile computing unit (Column 5, lines 41 – 48).

Regarding claim 32, Theimer discloses that the user database further comprises an active field indicating if the mobile computer user has used the to mobile computer within a specified time period (Column 9, lines 26 – 37).

Regarding claim 34, Theimer discloses that the location manager transmits the location of the mobile computer in coordinates relative to a known absolute location (Column 5, lines 48 – 64).

Regarding claim 36, Theimer discloses that the location manager transmits the location of a network node with which the mobile computer is communicating as the location of the mobile computer (Column 8, lines 49 – 58).

Regarding claim 37, Theimer discloses that the mobile computer is a first computer; the system further comprises a second computer having a location manager (Column 8, lines 45 – 48); the user database further comprises an active field; the mobile computer user is logged onto both the first mobile computer and the second computer; the location manager of the first computer and the location manager of the second computer are further configured to transmit an active signal for a specified period of time after the respective computers are used; to the active field corresponding to the first computer indicating the mobile computer user last used the first computer when the active signal is transmitted from the first computer; the active field corresponding to the second computer indicating the mobile computer user last used the second computer when the active signal is transmitted from the second computer;

and only one active field indicating activity by the mobile computer user at any given time (Column 9, lines 26 – 37; Column 21, lines 35 – 59).

Regarding claim 38, Theimer discloses that the user database further comprises an OK field that contains data that identifies one or more system users that are authorized to receive data regarding the location of the mobile computer user identified in the corresponding user field (Column 11, lines 1 – 6).

Regarding claim 40, Theimer discloses a network server, comprising: memory; a user database stored in the memory containing one or more records (Column 7, lines 29 – 60), each record including: a user field in the user database to store a user identifier; and a last known location field in the user database to store a most recent location identified for the corresponding user field (Column 7, line 61 – Column 8, line 11).

Regarding claim 42, Theimer discloses that each record further comprises an active field to store an indication of whether the user identified in the corresponding user field has been active on a client connected to the server within a specified period of time (Column 8, lines 5 – 11; Column 9, lines 26 – 37).

Regarding claim 43, Theimer discloses a wireless access point to which a mobile computing unit may connect to access the network (Column 5, lines 48 – 55).

Regarding claim 44, Theimer discloses a connection to wired network components (Column 5, lines 33 – 47).

Regarding claim 45, Theimer discloses a mobile computing unit, comprising: memory; a wireless network interface configured to connect the mobile computing unit

to a wireless access point of a remote server (Column 5, line 48 – Column 6, line 14); a location tracking service configured to determine a location of the mobile computer unit (Column 6, lines 28 – 45; Column 4, lines 30 – 33); and a location manager configured to periodically transmit the location of the mobile computing unit to the remote server via the wireless network interface (Column 8, line 64 – Column 9, line 6).

Regarding claim 46, Theimer discloses that the location manager is further configured to transmit a user name of a user logged onto the mobile computing unit to the remote server together with the location of the mobile computing unit (Column 27, lines 7 – 13).

Regarding claim 47, Theimer discloses that the location manager is further configured to transmit an active signal to the remote server together with the location of the mobile computing unit when a user logged is onto the mobile computing unit has actively used the unit within a specified period of time (Column 21, lines 35 – 65).

Regarding claim 49, Theimer discloses that the location manager identifies and transmits the location of a network node with which the mobile computing unit is communicating as the location of the mobile computing unit (Column 20, lines 12 – 18; Column 21, lines 28 – 34).

Regarding claim 50, Theimer discloses that the location manager is configured to invoke the location tracking service when commanded to do so by a second computing unit or the server (Column 21, lines 28 – 34).

Regarding claim 52, Theimer discloses that the location manager transmits the location of the mobile computing unit relative to a known absolute location (Column 5, lines 48 – 64).

Regarding claim 53, Theimer discloses that the location manager transmits a geographic region to the remote server as the location of the mobile computing unit (Column 5, lines 48 – 64).

Regarding claim 54, Theimer discloses that the location manager is further configured to encrypt the location of the mobile computing unit before transmitting the location of the mobile computing unit to the remote server (Column 21, lines 13 – 20).

Regarding claim 58, Theimer discloses a system, comprising: a server having memory; a user database stored in the memory of the server (Column 7, lines 29 – 60), the user database containing a user field for storing a user name of a mobile computer user, and a last known location field for storing a most recent location of a computer user identified in a corresponding user field (Column 7, line 61 – Column 8, line 11); a wireless access point configured to receive network transmissions from one or more mobile computers (Column 5, lines 26 – 32); a mobile computer having memory and a wireless network interface for communication with the wireless access point (Column 5, lines 48 – 55); a location tracking system in the mobile computer memory configured to determine a location of the mobile computer; a location manager in the mobile computer memory configured to transmit the location of the mobile computer and the user name of a mobile computer user to the server via the wireless network interface when a request to do so is received from the server (Column 8, lines 48 – 55; Column 6, lines

28 – 45); and a computing unit having a computing unit location manager configured to search the user database of the server to determine information regarding the location of a mobile user (Column 4, lines 30 – 34).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 6, 20, 21, 23, 33, 35, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theimer in view of Norris (578150).

Regarding claims 4, 5, 6, 20, 21, 23, 33, 35, and 51, Theimer discloses that the location of the first computer is represented GPS standards (Column 8, lines 52 – 58), but does not explicitly indicate that the GPS location is an absolute geographical unit. Norris teaches a system, which includes mobile devices delivering location information received from GPS. In Norris teaches it is disclosed that the GPS can deliver absolute geographical coordinates (Column 5, lines 39 – 46) and that the absolute location includes longitude, latitude, and altitude (Column 5, lines 28 – 38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include Norris calculations of an absolute location of a mobile device in Theimer's system in order to know the exact precise position of an individual in case of an emergency (Column 1, lines 20 – 30).

Claims 8, 9, 18, 31, 31, 48, 55, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theimer in view of Dunn (5659596).

Regarding claims 8, Theimer does not explicitly indicate time-stamping the location of the first computer with the time that the first computer was identified. Dunn teaches a system that includes locating mobile devices. Included in this teaching is a system of time-stamping the location information of the mobile device (Column 8, lines 15 – 24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use time-stamping in Theimer's user location system in order for the system to know where the last known location of a user is based upon what time the location information was updated (Column 13, lines 35 – 54).

Regarding claim 9, the combination of Theimer and Dunn discloses that The method as recited in claim 8, wherein the determining the last known location of the first computer further comprises determining the location of the first computer that has a most recent time stamp (Dunn, Column 13, lines 35 – 54).

Regarding claim 10, the combination of Theimer and Dunn discloses that the determining the last known location of the first computing unit further comprises: calculating a time differential between a current time and the time stamp of a most recent location identified for the first computer; comparing the time differential with a pre-defined time threshold; defining the last known location of the first computer as the most recent location if the time differential is less than the time threshold; and invoking a location tracking service to identify a current location of the first to computer as the last

known location if the time differential is greater than the time threshold (Dunn, Column 13, line 55 – Column 14, line 11).

Regarding claim 18, the combination of Theimer and Dunn discloses time-stamping the transmission to the network server and transmitting the time stamp to with the transmitted information (Dunn, Column 8, lines 15 – 24).

Regarding claim 31, the combination of Theimer and Dunn discloses that, wherein: the mobile computer further comprises a clock; the location manager is further configured to transmit a time of transmission to the server together with the location and user name information; and the user database further comprises a time field for storing the time that a transmission identifying the location of the mobile user and the user name of the mobile computer user is received from the mobile computer (Dunn, Column 8, lines 15 – 24).

Regarding claim 39, the combination of Theimer and Dunn discloses that location manager of the computing unit is further configured to: search the user database to locate an entry for a specific user; calculate a time differential between a current time and a time stored in the time field corresponding to the specific user if the specific user is found; compare the time differential to a time threshold; recognize the location contained in the last known location field s corresponding to the specific user as the location of the specific user if the time differential is within the time threshold; transmit a signal to cause the location manager of the mobile computer to invoke the location tracking system of the mobile computer if the time differential is not within the time threshold, to determine the location of the mobile computer and transmit location and

user information to the server where it is stored in the user database; and recognize the newly stored location contained in the last known location field corresponding to the specific user as the location of the specific user (Dunn, Column 8, lines 15 – 24).

Regarding claim 41, the combination of Theimer and Dunn discloses that each record to further comprises a time field to store a time that the corresponding last known location was stored (Dunn, Column 13, lines 35 – 54).

Regarding claim 48, the combination of Theimer and Dunn discloses a clock, and wherein the location manager is further configured to time-stamp the transmission of the location information with a time that the transmission is sent (Dunn, Column 8, lines 15 – 24).

Regarding claim 55, the combination of Theimer and Dunn discloses a method for locating a mobile computer user in a wireless network, comprising: periodically identifying a location of a mobile computer that is used by a mobile user (Theimer, Column 4, lines 30 – 33; Column 8, lines 45 – 58; Column 9, lines 35 – 37) and associating a time stamp with the location indicating a time at which the location was identified (Dunn, Column 8, lines 15 – 24); transmitting the location of the mobile computer to a network server together with the time stamp and a name of the mobile user; storing the transmitted information on the network server (Theimer, Column 8, lines 48 – 55; Column 6, lines 28 – 45); receiving a request from a computing unit for the location of the mobile user (Theimer, Column 9, lines 7 – 20); determining the last known location of the mobile computer by accessing the network server and finding the location having a most recent time stamp (Dunn, Column 13, lines 35 – 54); and

recognizing the last known location of the mobile computer as the location is of the mobile user (Theimer, Column 9, lines 31 – 33).

Regarding claim 57, the combination of Theimer and Dunn discloses transmitting an active signal together with the location information if the mobile user has actively used the mobile computer within a specified period of time (Theimer, Column 9, lines 26 – 35).

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Theimer in view of Dunn as applied to claim 8, 9, 18, 31, 31, 48, 55, and 57 above, and further in view of Rentz (5163004).

Regarding claim 56, the combination of Theimer and Dunn does not explicitly indicate identifying the location of the mobile user by measuring relative strengths of radio frequency transmissions emitted from a plurality of base stations. Rentz teaches a system that can track mobile devices based on RF signal strength (Column 3, lines 1 – 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Rentz's teaching of tracking devices based on the RF signal and Theimer's user location system in order to track the device using a simple and effective means with only one station needed (Column 2, lines 40 - 52).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6266533 issued to Zadeh, because it discloses tracking a mobile device with absolute location information.

U. S. Patent No. 5919239 issued to Fraker, because it has location and time specific information about a mobile device using GPS.

U. S. Patent No. 5652570 issued to Lepkofker, because it associates devices to users and tracks their position and time-stamps.

U. S. Patent No. 6331825 issued to Ladner, because it transmits location information for remote tracking.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (703) 605-0633. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (703) 308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
May 14, 2004


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER